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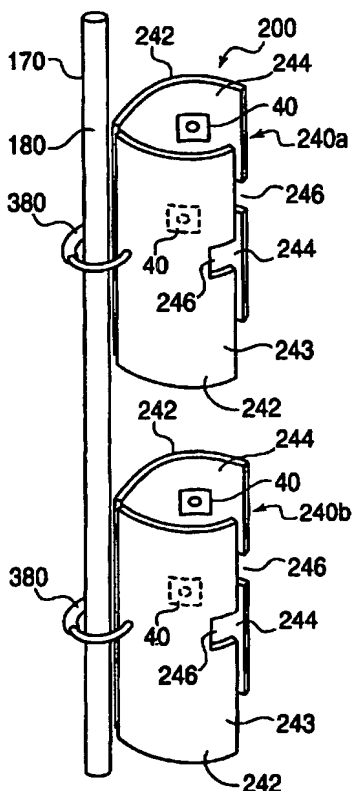
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[Continued on next page]

(54) Title: DELIVERY DEVICE FOR STIMULATING THE SYMPATHETIC NERVE CHAIN



(57) Abstract: The present invention provides a device and assembly for electrically and/or chemically stimulating individual ganglion and a plurality of ganglia of the nervous system, and particularly to ganglia of the sympathetic nerve chain. A device is provided that generally wraps around an individual ganglion and conforms to the shape of the ganglion without exerting excessive pressure on the ganglion to damage the ganglion. An assembly (200) is also provided that includes an axially elongated shaft (170) that can be positioned adjacent to the sympathetic nerve chain and that can receive a plurality of ganglion stimulators (240) that can slidably engage with the outer surface of the shaft. As additional ganglia are desired to be stimulated, each of the plurality of ganglion stimulators can be added to the shaft to engage the outer surface of the shaft and can be positioned adjacent to the ganglia desired to be stimulated.



European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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22 January 2004

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**Previous Correction:**

see PCT Gazette No. 47/2003 of 20 November 2003, Section II

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/03003

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61N 1/05  
US CL : 607/118

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 607/118, 116, 117, 125, 148, 149; 600/373, 377, 393

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,545,219 A (KUZMA) 13 August 1996 (13.08.1996), entire document.	28
A	US 6,178,349 B1 (KIEVAL) 23 January 2001 (23.01.2001), entire document.	1-31

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

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"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

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"P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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document member of the same patent family

Date of the actual completion of the international search

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**INTERNATIONAL SEARCH REPORT**

PCT/US03/03003

**Continuation of B. FIELDS SEARCHED Item 3:**

EAST

search terms: ganglion, ganglia, cuff, wrap, cup, electrode, array, nerve, slide